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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,128	06/25/2004	James Surjan	P25,624A USA	7387

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EXAMINER
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SELLERS, ROBERT E

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/500,128	<b>Applicant(s)</b> SURJAN, JAMES	
	<b>Examiner</b> Robert Sellers	<b>Art Unit</b> 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-19 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/25/04 &amp; 10/3/05</u> . | 6) <input type="checkbox"/> Other: ____.  |

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1. The word "least" is misspelled in claim 1, line 4. The degree symbol is incorrectly represented as "?" in claim 13, lines 3 and 5. The terms "claim1having" in claim 18 and "claim11having" in claim 19 should be separated.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

2. There is no antecedent basis for the "active components" of claim 6 in claim 5 wherefrom it depends.

3. Claim 7 and claims 8-10 dependent thereon does not further limit claim 1 wherefrom it depends since claim 1 already defines the combination of aliphatic amine and tertiary amine.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-10 and 18 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Surjan et al. Patent Nos. 6,291,555 (claims 1-19); 6,403,678 (claims 1, 2, and 8-10) or 6,420,458 (claims 1-12 and 23-26). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the Surjan et al. patents require anchoring adhesives comprising a first part of from about 20-45% by weight of an epoxy resin and a second part of from about 5-20% by weight of an amine compound and a tertiary amine. The epoxy resin is represented by a bisphenol A epoxy resin and the amine compound includes an aliphatic amine such as Ancamine 1856 deemed to be suitable according to page 10, line 12 of the instant specification ('555, col. 5, lines 48-50 and col. 7 example, lines 7 and 18; '678, col. 6, lines 44-47 and col. 7 example, lines 34 and 46; and '458, col. 4, lines 63-65 and col. 6 example, lines 18 and 23).

5. Based on the equivalent formulations comprising an epoxy resin, aliphatic amine and tertiary amine of the Surjan et al. patents and claims, the anchoring adhesives of the Surjan et al. patents inherently pass the claimed ICBO Heat Creep Test at 110°F and the ICBO Damp Hole Test at 75°F.

Claims 11-14 and 19 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the claims of the Surjan et al. patents cited hereinabove in view of Coleman et al. Patent No. 6,166,849 and Morgan et al. Patent No. 5,681,128.

6. The claimed epoxy:amine weight ratio of from about 0.8:1 to about 1:1 defined in claims 11 and 12 is not recited. The Surjan et al. patents also do not recite the claimed combination of a first aliphatic amine with an amine value of from about 400 to about 500 mg KOH/g and a second aliphatic amine having an amine value of at least about 550 mg KOH/g, both possessing a glass transition temperature of from about 130°F (i.e. about 54°C) to about 135°F (about 62°C) denoted in claims 13-17. The specification in the paragraphs bridging pages 8-9 describes the claimed combination of aliphatic amines. Page 10 discloses a preferred combination of Ancamine 1856 and Ancamine 2205 assumed to be within the claimed first and second aliphatic amines.

7. Coleman et al. (cols. 7-8, Table I) shows a curable adhesive composition (col. 7, line 5) prepared from an epoxy resin and Ancamine 1856 or Ancamine 2205 in an active hydrogen:epoxy equivalent ratio of from 0.75:1 to 1.5:1, which converts to an epoxy:amine equivalent ratio of from 0.67:1 to 1.3:1, thereby embracing the claimed parameters. It is revealed in column 4, lines 65-66 that "a plurality of curing agents can be combined to cure a given resin." Morgan et al. (col. 9, lines 6-25 and cols. 11-12, Example 1 and Table 1) shows a two-part epoxy adhesive wherein Part A contains an epoxy resin and Part B is composed of a curing agent such as preferably Ancamine 2205.

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8. It would have been obvious to employ the epoxy resin and amine compound of the Surjan et al. patents in an epoxy:amine equivalent ratio of from 0.67:1 to 1.3:1 reported in Coleman et al. in order to optimize the curability. It would have been obvious to use a blend of the Ancamine 1856 and Ancamine 2205 disclosed in Coleman et al. for the amine compound of the Surjan et al. patents in order to improve the moisture resistance (Coleman et al., col. 5, lines 32-33; col. 7, lines 17-18 and cols. 7-8, Table I) and lap shear strength (Morgan et al., col. 12, Tables I and IB).

Claims 15-17 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over the claims of the Surjan et al. patents cited hereinabove in view of Gienau et al. Patent No. 6,645,340 and Hartman et al. Patent No. 5,962,602.

The claimed reactive diluent is not recited.

9. Gienau et al. sets forth a two-component "mortar composition for fastening anchoring means in boreholes in natural as well as in artificial rock (col. 2, lines 24-32)" wherein one component contains an epoxide resin such as especially a polyglycidyl ether of bisphenol A (col. 4, lines 40-43 and col. 6, Example, Component A, lines 6-7) and a reactive diluent in a weight ratio of epoxide resin to reactive diluent of from 50:50 to 99:1 (col. 3, lines 37-39), and the other component includes an amine curing agent such as an aliphatic polyamine (col. 6 Example, Component B, line 20) in a converted epoxy:reactive amine hydrogen ratio of from 0.5:1 to 1.25:1 (col. 4, lines 62-65).

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10. Hartman et al. (col. 2, lines 54-61) espouses a two-part epoxy sealer/healer wherein Part A contains an epoxy resin such as preferably a bisphenol A-epichlorhydrin resin (col. 3, lines 5-7 and cols. 5-6, Example 1) and a reactive diluent (col. 3, lines 14-22) and Part B is obtained from an amine curing agent such as an aliphatic amine (col. 3, lines 47-50 and Example 1) and an accelerator such as 2,4,6-tri(dimethylaminomethyl)phenol (Example 1, described on page 10, lines 14-15 of the instant specification).
11. It would have been obvious to incorporate the reactive diluent of Gienau et al. and Hartman et al. into the two-part adhesives of the Surjan et al. patents in order to mitigate cracking, shrinkage and creep, enhance the dimensional stability, toughness, high load values and shorten curing times (Gienau et al., col. 3, lines 6-15) as well as to reduce the viscosity (Hartman et al., col. 3, lines 14-22).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claims 1-10 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Surjan et al. Patent Nos. 6,291,555; 6,403,678 or 6,420,458 applied hereinabove, or Surjan et al. Patent Nos. 6,402,434 or 6,416,256.

12. The Surjan et al. patents are described in previous paragraph 4. Surjan et al. '434 (cols. 7-8, Example 1) or '256 (col. 7, lines 20-23, 32-35 and 45-49; and col. 8, lines 23-27 and 47-60) report two-part anchoring adhesives composed of a first part containing an epoxy resin such as a bisphenol A-epichlorohydrin resin and a second part comprising an aliphatic amine and a tertiary amine.

13. Based on the equivalent formulations comprising an epoxy resin, aliphatic amine and tertiary amine of the Surjan et al. patents and claims, the anchoring adhesives of the Surjan et al. patents inherently pass the claimed ICBO Heat Creep Test at 110°F and the ICBO Damp Hole Test at 75°F.



The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Surjan et al. patents cited hereinabove in view of Coleman et al. and Morgan et al.

The claimed epoxy:amine weight ratio of from about 0.8:1 to about 1:1 defined in claims 11 and 12 is not recited. The Surjan et al. patents also do not recite the claimed combination of a first aliphatic amine with an amine value of from about 400 to about 500 mg KOH/g and a second aliphatic amine having an amine value of at least about 550 mg KOH/g, both possessing a glass transition temperature of from about 130°F (i.e. about 54°C) to about 135°F (about 62°C) denoted in claims 13-17.

The Surjan et al. patents are explained in previous paragraphs 4 and 12.

Coleman et al. and Morgan et al. are disclosed in previous paragraph 7.

14. It would have been obvious to employ the epoxy resin and amine compound of the Surjan et al. patents in an epoxy:amine equivalent ratio of from 0.67:1 to 1.3:1 reported in Coleman et al. in order to optimize the curability. It would have been obvious to use a blend of the Ancamine 1856 and Ancamine 2205 disclosed in Coleman et al. for the amine compound of the Surjan et al. patents in order to improve the moisture resistance (Coleman et al., col. 5, lines 32-33; col. 7, lines 17-18 and cols. 7-8, Table I) and lap shear strength (Morgan et al., col. 12, Tables I and IB).

Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Surjan et al patents cited hereinabove in view of Gienau et al. and Hartman et al.

The claimed reactive diluent is not recited. The Surjan et al. patents are explained in previous paragraphs 4 and 12. Gienau et al. and Hartman et al. are discussed in previous paragraphs 9 and 10.

15. It would have been obvious to incorporate the reactive diluent of Gienau et al. and Hartman et al. into the two-part adhesives of the Surjan et al. patents in order to mitigate cracking, shrinkage and creep, enhance the dimensional stability, toughness, high load values and shorten curing times (Gienau et al., col. 3, lines 6-15) as well as to reduce the viscosity (Hartman et al., col. 3, lines 14-22).

Claims 1-10 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent Nos. 61-148280 or 2001-240837; European Patent No. 488,949; CAPLUS accession nos. 1984:492829 or 1983:488931 to Shimbo et al., or CAPLUS accession no. 1985:59680 to Toussaint et al.

16. Japanese '280 (CAPLUS abstract), Japanese '837 (translation, page 10, paragraph 47 and page 11, Table 3, Example 3), the European patent (pages 5-7, Example 1), the Shimbo et al. abstracts or the Toussaint et al. abstract show blends of bisphenol A epoxy resins with aliphatic polyamines and 2,4,6-tris(dimethylaminomethyl)phenol.

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Based on the equivalent formulations comprising an epoxy resin, aliphatic amine and tertiary amine of the Japanese or European patents, or the Shimbo et al. or Toussaint et al. abstracts and claims, the anchoring adhesives of the references inherently pass the claimed ICBO Heat Creep Test at 110°F and the ICBO Damp Hole Test at 75°F.

Claims 11-14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese '280, Japanese '837, the European patent and the Shimbo et al. and Toussaint et al. abstracts in view of Coleman et al. and Morgan et al.

The claimed epoxy:amine weight ratio of from about 0.8:1 to about 1:1 defined in claims 11 and 12 is not recited. The Japanese and European patents, and the Shimbo et al. and Toussaint et al. abstracts also do not recite the claimed combination of a first aliphatic amine with an amine value of from about 400 to about 500 mg KOH/g and a second aliphatic amine having an amine value of at least about 550 mg KOH/g, both possessing a glass transition temperature of from about 130°F (i.e. about 54°C) to about 135°F (about 62°C) denoted in claims 13-17. The Japanese and European patents, and the Shimbo et al. and Toussaint et al. abstracts are explained in previous paragraph 16. Coleman et al. and Morgan et al. are disclosed in previous paragraph 7.

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17. It would have been obvious to employ the epoxy resin and aliphatic polyamine of the Japanese and European patents, and the Shimbo et al. and Toussaint et al. abstracts in an epoxy:amine equivalent ratio of from 0.67:1 to 1.3:1 reported in Coleman et al. in order to optimize the curability. It would have been obvious to use a blend of the Ancamine 1856 and Ancamine 2205 disclosed in Coleman et al. as the aliphatic polyamine of the Japanese and European patents, and the Shimbo et al. and Toussaint et al. abstracts in order to improve the moisture resistance (Coleman et al., col. 5, lines 32-33; col. 7, lines 17-18 and cols. 7-8, Table I) and lap shear strength (Morgan et al., col. 12, Tables I and IB).

Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese '280, Japanese '837, the European patent and the Shimbo et al. and Toussaint et al. abstracts in view of Gienau et al. and Hartman et al.

The claimed reactive diluent is not recited. The Japanese and European patents, and the Shimbo et al. and Toussaint et al. abstracts are explained in previous paragraph 16. Gienau et al. and Hartman et al. are discussed in previous paragraphs 9 and 10.

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18. It would have been obvious to incorporate the reactive diluent of Gienau et al. and Hartman et al. into the blends of the Japanese and European patents, and the Shimbo et al. and Toussaint et al. abstracts in order to mitigate cracking, shrinkage and creep, enhance the dimensional stability, toughness, high load values and shorten curing times (Gienau et al., col. 3, lines 6-15) as well as to reduce the viscosity (Hartman et al., col. 3, lines 14-22).

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coleman et al., Morgan et al. Gienau et al., Hartman et al., Armin et al. Patent No. 6,214,159; Grieves et al. Patent No. 4,623,702; Martin Patent No. 6,572,971 and Japanese Patent Nos. 2000-273354, 57-159866 and 60-258277.

19. Coleman et al., Morgan et al., Gienau et al. and Hartman et al. are described in previous paragraphs 7, 9 and 10. Armin et al. (col. 1, lines 29-33 and 49-50; and col. 2, lines 46-51), Grieves et al. (col. 2, lines 4-21; col. 3, lines 20, 22 and 23, aliphatic amine hardeners (c), (e) or (f); and lines 43-46), Martin (col. 2, lines 14-26; col. 3, line 62 to col. 4, line 11), Japanese '354 (Patent Abstracts of Japan), Japanese '866 (abstracts) and Japanese '277 (abstracts) are directed to adhesives obtained from epoxy resins such as bisphenol A diglycidyl ethers, aliphatic polyamines, some with tertiary amine accelerators. Japanese '866 and '277 report an epoxy:amine equivalent ratio of from 0.8:1 to 1.2:1, thereby encompassing the range of from about 0.8:1 to about 1:1 denoted in claims 11-17 and 19.

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20. Coleman et al., Morgan et al., Martin and Japanese '866 and '277 do not recite the claimed tertiary amine. Gienau et al. (col. 2, line 31 and col. 5, line 7), Armin et al. (col. 2, lines 19-20) and Japanese '354 (translation, paragraph 8) disclose but do not exemplify a curing catalyst such as triethylamine (Gienau et al.) or 2,4,6-tri(dimethylaminomethyl)phenol (Japanese '354). Hartman et al. (col. 3, lines 54-57 and col. 6, Example 1, Part B, line 7) and Grieves et al. (col. 3, lines 41-45 and col. 4, line 65) exemplify 2,4,6-tri(dimethylaminomethyl)phenol.

21. It would have been obvious to add the tri(dimethylaminomethyl)phenol of Hartman et al. and Grieves et al. to the compositions of Coleman et al., Morgan et al., Gienau et al., Armin et al., Martin and Japanese '866 and '277 in order to increase the rate of cure.

22. Hartman et al. and Grieves et al. disclose but do not exemplify the claimed aliphatic amine. It would have been obvious to employ the preferred Ancamine 1856 modified aliphatic polyamine of Coleman et al. (col. 4, lines 55-60) and/or the Ancamine 2205 aliphatic amine of Coleman et al. and Morgan et al. (col. 9, lines 17-22 and col. 12, Example 1, Part B, line 15) in order to improve the moisture resistance (Coleman et al., col. 5, lines 32-33; col. 7, lines 17-18 and cols. 7-8, Table I) and lap shear strength (Morgan et al., col. 12, Tables I and IB).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

rs  
11/15/2006



ROBERT SELLERS  
PRIMARY EXAMINER